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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
KHATRI, ANIL	

ART UNIT	PAPER NUMBER
2191	

MAIL DATE	DELIVERY MODE
09/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/775,624	KHAN ET AL.	
	Examiner	Art Unit	
	Anil Khatri	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. This action is in response to the request for reconsideration filed on 7/18/2007.

2. As per applicant's request claims 1, 11,1927 and 32 have been are amended.

3. As per applicant request claims 1-33 has been considered but they are not persuasive.

4. Claims 19-26 and 32-33 stand rejected under 35 USC 101 because they disclose a claimed invention that is an abstract idea as defined in the case In re *Warmerdam*, 33, F 3d 1354, 31 USPQ 2d 1754 (Fed. Cir. 1994).

5. Claims 1-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Al-Azzawe USPN 7,155,426

In remarks applicant argues,

I. Claims 19-26 and 32-33 are within technological arts and now are limited to tangible embodiments and recites statuary subject matter.

II. Debugging of managed code as compared to unmanaged or non-interpreted code.

III. Utilizes debugging of managed code which managed code is vastly different than the compiled code.

IV. Ability to debug managed code more than one client may debug code on the server at once, communication may take place via HTTP and dynamic non persistent code may be debugged, corrected and verified.

V. Managed code in connection with SQL database.

VI. Requiring the detection of a transition between T SQL and managed code which detection is communicated to the debugger.

VII. Detection of a dynamic T SQL frame added to a computer server user stack and passing text of that added frame to the bugger.

In response to applicant's arguments,

I. Claims 19-26 and 32-33 stand rejected and do not render any statutory subject matter. Examiner interprets that claims 19-26 and 32-33 are non-statutory because claim recites computer program which is, per se i.e. the description or expressions of the program are not physical things nor are they statutory process as they do not act being performed. Computer programs do not define any structural and functional interrelationship between the computer program and other claimed aspect of the invention which permits the computer program's functionality could be realized. Therefore, computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process.

II. It was noted that cited art fairly teaches debugging of managed code as compared to unmanaged or non-interpreted code (column 7, lines 45-57, After the loading of the non-trusted SQL stored procedure, the debugging is commanded and monitored from the console via the debugger manager 214 software, which communicates with a debugger router 216 software, running on the server 202 as agent-2. The debugger router 216 software uses its own SQL stored procedures to communicate with the console 200 through the database connection communication line 212. When the debugging and managing commands are on the server 202 site received by the debugger router 216, it then invokes an appropriate system routine sent to the debugger engine 218, to initiate or perform the debugging of the debugged session 220,

according to the request sent from the client management console 200, and to return the requested information to the debugger manager 214 at the console 200 site). Therefore, examiner interprets that debugging is done and while code is compared which is code to be done for debugging.

III. It was also noted that cited reference fairly suggest utilizes debugging of managed code which managed code is vastly different than the compiled code (column 8, lines 30-49, Although shown in regard to debugging of stored procedures, the present invention can also be used in a similar way for debugging of SQL UDFs and SQL triggers, as both of these use PSM and are compiled in the same manner. As mentioned previously, in the present invention, the PSM debugger interface uses special debug C API calls as hooks. The PSM compiler inserts one or more of these debug C API calls before or after each compiled SQL statement when debugging may be needed. When a SQL stored procedure is compiled in debug mode, these debug C API calls are compiled-in and processed. However, when debugging is not needed in release mode, these debug C API calls are defined as no-operation (no-op'd) and compiled out from the SQL stored procedures. Shown below is an example of a SQL stored procedure with the required PSM Debugger Interface C API hooks inserted in the original source code of the stored procedure. The PSM Compiler inserts the following set of C APIs in the compiled PSM code as debugger hooks to trace the execution of the SQL stored procedure). Therefore, examiner interprets that debugging code has been utilized differ from compiled code to non-compiled code.

IV. It was also noted that cited reference teaches able to debug managed code more than one client may debug code on the server at once, communication may take place via HTTP and dynamic non persistent code may be debugged, corrected and verified (figures 1-2, column 5, lines 11-30, server 102 site database manager agents (threads/processes) are used with the preferred embodiments of the present invention for debugging of a trusted SQL stored procedure on the database server 102. They both use the database connection communication line 112 to communicate with the console 100. Prior to debugging, the console-based client application 110 invokes an agent-1 122 on the server 102, which starts a debugger engine 118, and commands it to load and start a debugged session 120, running the trusted SQL stored procedure on the database server 102. Afterwards, the trusted SQL stored procedure of the debugged session 120 is executed and debugged by the debugger engine 118 software. A session is a process (thread) executing some application software, which may include SQL stored procedures. The agent-1 122 is also connected with the DBMS 108 and has access to the database items. It returns the debugging results back to the client application 110, using the same database connection communication line 112). Thus, examiner interprets that it allows debugging using communication link with different servers.

V. It was also noted that cited reference fairly teaches managed code in connection with SQL database (column 5, lines 31-50, after the loading of the trusted SQL stored procedure, the debugging is commanded and monitored from the console terminal 104 via the debugger manager 114 software, which communicates with a debugger router 116 software, running on the server 102 as agent-2. The debugger router 116 software uses its own SQL stored procedures to communicate with the console 100 through the database connection

communication line 112. When the debugging and managing commands are on the server 102 site received by the debugger router 116, it then invokes an appropriate system routine, sent to the debugger engine 118 to initiate or perform the debugging of the debugged session 120, according to the request sent from the client management console 100, and to return the requested information to the debugger manager 114 at the console 100 site. The debugger router 116 uses a set of stored procedures that are invoked by the debugger manager 114 to initiate and terminate the debugging, as well as send and receive data from the debugger engine 118. Therefore, the debugger router 116 acts as a data router by forwarding client data from the debugger manager 114 to the debugger engine 118 and vice versa). Therefore SQL database is involved in managing code.

VI. It was also noted that cited reference also suggest requiring the detection of a transition between T SQL and managed code which detection is communicated to the debugger (column 2, lines 56-65, The server has a database management system for retrieving data from a database stored in an electronic storage device coupled to the server. The method uses a debugger manager at the console for commanding and monitoring debugging operations of the server-side SQL instructions performed by a debugger engine, and uses stored procedures of a debugger router as a database communication interface for receiving commands and sending status reports between the debugger manager and the debugger engine). Therefore, examiner interprets that sort of detection is done by monitoring by debugger manager with debugger engine.

VII. It was also noted that reference fairly teaches detection of a dynamic T SQL frame added to a computer server user stack and passing text of that added frame to the bugger (column 2, lines 66-67 and column 3, lines 1-18, The debugged SQL instructions are selected from a group comprising stored procedures, user defined functions and triggers. The method may invoke a database manager Data Access Remote Interface (DARI) process for performing debugging in a fenced server address and process space. The debugging method provides call-stack tracking, line-by-line execution status reporting, line breakpoints management, variable change breakpoints management, and has variable value reporting and modification capabilities. The debugging is performed through debugger interface software instructions, inserted during compilation of the SQL instructions as debugger hooks, for tracing the execution of the SQL instructions. The debugger interface software instructions include C API calls as debugger hooks which provide for each SQL instruction a source code line number for each SQL statement, names of variables declared by each SQL DECLARE statement, including the SQL type information, names of variables modified by the SQL statement, a current SQL code and state, for each routine entry and exit information, and for each exception entry and exit information).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anil Khatri whose telephone number is 571-272-3725. The examiner can normally be reached on M-F 8:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANIL KHATRI
PRIMARY EXAMINER